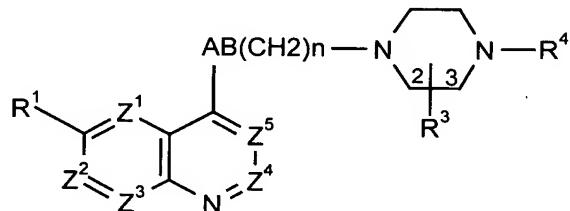


**Amendments to the Specification:**

Please amend the specification by replacing the paragraph sections under the heading "Related Applications" with the following new paragraph sections:

**At page 1, lines 11-20:**

This invention provides a compound of formula (I) or a pharmaceutically acceptable derivative salt and/or N-oxide thereof:



(I)

wherein:

one of Z<sup>1</sup>, Z<sup>2</sup>, Z<sup>3</sup>, Z<sup>4</sup> and Z<sup>5</sup> is N, one is CR<sup>1a</sup> and the remainder are CH, or one of Z<sup>1</sup>, Z<sup>2</sup>, Z<sup>3</sup>, Z<sup>4</sup> and Z<sup>5</sup> is CR<sup>1a</sup> and the remainder are CH;

**At page 2, lines 2-37 to page 3, lines 1-4:**

R<sup>3</sup> is in the 2- or 3-position and is:

carboxy; (C<sub>1-6</sub>)alkoxycarbonyl; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, (C<sub>1-6</sub>)alkyl, hydroxy(C<sub>1-6</sub>)alkyl, aminocarbonyl(C<sub>1-6</sub>)alkyl, (C<sub>2-6</sub>)alkenyl, (C<sub>1-6</sub>)alkylsulphonyl, trifluoromethylsulphonyl, (C<sub>1-6</sub>)alkenylsulphonyl, (C<sub>1-6</sub>)alkoxycarbonyl, (C<sub>1-6</sub>)alkylcarbonyl, (C<sub>2-6</sub>)alkenyloxycarbonyl or (C<sub>2-6</sub>)alkenylcarbonyl and optionally further substituted by (C<sub>1-6</sub>)alkyl, hydroxy(C<sub>1-6</sub>)alkyl, aminocarbonyl(C<sub>1-6</sub>)alkyl or (C<sub>2-6</sub>)alkenyl; cyano; tetrazolyl; 2-oxo-oxazolidinyl optionally substituted by R<sup>10</sup>; 3-hydroxy-3-cyclobutene-1,2-dione-4-yl; 2,4-thiazolidinedione-5-yl; tetrazol-5-ylaminocarbonyl; 1,2,4-triazol-5-yl optionally substituted by R<sup>10</sup>; or 5-oxo-1,2,4-oxadiazol-3-yl; or

$R^3$  is in the 2- or 3-position and is ( $C_{1-4}$ )alkyl or ethenyl optionally substituted with any of the groups listed above for  $R^3$  and/or 0 to 3 groups  $R^{12}$  independently selected from:

thiol; halogen; ( $C_{1-6}$ )alkylthio; trifluoromethyl; azido; ( $C_{1-6}$ )alkoxycarbonyl; ( $C_{1-6}$ )alkylcarbonyl; ( $C_{2-6}$ )alkenyloxycarbonyl; ( $C_{2-6}$ )alkenylcarbonyl; hydroxy optionally substituted by ( $C_{1-6}$ )alkyl, ( $C_{2-6}$ )alkenyl, ( $C_{1-6}$ )alkoxycarbonyl, ( $C_{1-6}$ )alkylcarbonyl, ( $C_{2-6}$ )alkenyloxycarbonyl, ( $C_{2-6}$ )alkenylcarbonyl or aminocarbonyl wherein the amino group is optionally substituted by ( $C_{1-6}$ )alkyl, ( $C_{2-6}$ )alkenyl, ( $C_{1-6}$ )alkylcarbonyl or ( $C_{2-6}$ )alkenylcarbonyl; amino optionally mono- or disubstituted by ( $C_{1-6}$ )alkoxycarbonyl, ( $C_{1-6}$ )alkylcarbonyl, ( $C_{2-6}$ )alkenyloxycarbonyl, ( $C_{2-6}$ )alkenylcarbonyl, ( $C_{1-6}$ )alkyl, ( $C_{2-6}$ )alkenyl, ( $C_{1-6}$ )alkylsulphonyl, ( $C_{2-6}$ )alkenylsulphonyl or aminocarbonyl wherein the amino group is optionally substituted by ( $C_{1-6}$ )alkyl or ( $C_{2-6}$ )alkenyl; aminocarbonyl wherein the amino group is optionally substituted by ( $C_{1-6}$ )alkyl, hydroxy( $C_{1-6}$ )alkyl, aminocarbonyl( $C_{1-6}$ )alkyl, ( $C_{2-6}$ )alkenyl, ( $C_{1-6}$ )alkylcarbonyl, ( $C_{2-6}$ )alkenyloxycarbonyl or ( $C_{2-6}$ )alkenylcarbonyl and optionally further substituted by ( $C_{1-6}$ )alkyl, hydroxy( $C_{1-6}$ )alkyl, aminocarbonyl( $C_{1-6}$ )alkyl or ( $C_{2-6}$ )alkenyl; oxo; ( $C_{1-6}$ )alkylsulphonyl; ( $C_{2-6}$ )alkenylsulphonyl; or ( $C_{1-6}$ )aminosulphonyl wherein the amino group is optionally substituted by ( $C_{1-6}$ )alkyl or ( $C_{2-6}$ )alkenyl;

provided that when  $R^3$  is disubstituted with hydroxy or amino and carboxy containing substituents these may optionally together form a cyclic ester or amide linkage, respectively;

wherein  $R^{10}$  is selected from ( $C_{1-4}$ )alkyl; ( $C_{2-4}$ )alkenyl; aryl; a group  $R^{12}$  as defined above; carboxy; aminocarbonyl wherein the amino group is optionally substituted by hydroxy, ( $C_{1-6}$ )alkyl, ( $C_{2-6}$ )alkenyl, ( $C_{1-6}$ )alkylsulphonyl, trifluoromethylsulphonyl, ( $C_{1-6}$ )alkenylsulphonyl, ( $C_{1-6}$ )alkoxycarbonyl, ( $C_{1-6}$ )alkylcarbonyl, ( $C_{2-6}$ )alkenyloxycarbonyl or ( $C_{2-6}$ )alkenylcarbonyl and optionally further substituted by ( $C_{1-6}$ )alkyl or ( $C_{2-6}$ )alkenyl; cyano; or tetrazolyl;

**At page 3, lines 19-34:**

AB is  $NR^{11}CO$ ,  $CO-CR^8R^9$  or  $CR^6R^7-CR^8R^9$  or when n is 1 or 2, AB may instead be  $O-CR^8R^9$  or  $NR^{11}-CR^8R^9$ , or when n is 2 AB may instead be  $CR^6R^7-NR^{11}$  or  $CR^6R^7-O$ , provided that when n is 0, B is not  $CH(OH)$ ,

and wherein:

each of R<sup>6</sup> and R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> is independently selected from: H; thiol; (C<sub>1-6</sub>)alkylthio; halo; trifluoromethyl; azido; (C<sub>1-6</sub>)alkyl; (C<sub>2-6</sub>)alkenyl; (C<sub>1-6</sub>)alkoxycarbonyl; (C<sub>1-6</sub>)alkylcarbonyl; (C<sub>2-6</sub>)alkenylloxycarbonyl; (C<sub>2-6</sub>)alkenylcarbonyl; hydroxy, amino or aminocarbonyl optionally substituted as for corresponding substituents in R<sup>3</sup>; (C<sub>1-6</sub>)alkylsulphonyl; (C<sub>2-6</sub>)alkenylsulphonyl; or (C<sub>1-6</sub>)aminosulphonyl wherein the amino group is optionally substituted by (C<sub>1-6</sub>)alkyl or (C<sub>1-6</sub>)alkenyl;

or R<sup>6</sup> and R<sup>8</sup> together represent a bond and R<sup>7</sup> and R<sup>9</sup> are as above defined; and each R<sup>11</sup> is independently H, trifluoromethyl, (C<sub>1-6</sub>)alkyl, (C<sub>4-6</sub>)alkenyl, (C<sub>1-6</sub>)alkoxycarbonyl, (C<sub>1-6</sub>)alkylcarbonyl, aminocarbonyl wherein the amino group is optionally substituted by (C<sub>1-6</sub>)alkoxycarbonyl, (C<sub>1-6</sub>)alkylcarbonyl, (C<sub>4-6</sub>)alkenylloxycarbonyl, (C<sub>2-6</sub>)alkenylcarbonyl, (C<sub>1-6</sub>)alkyl or (C<sub>4-6</sub>)alkenyl and optionally further substituted by (C<sub>1-6</sub>)alkyl or (C<sub>4-6</sub>)alkenyl;

or where one of R<sup>3</sup> and R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup> or R<sup>9</sup> contains a carboxy group and the other contains a hydroxy or amino group they may together form a cyclic ester or amide linkage

wherein:

'heterocyclic' is an aromatic and non-aromatic, single or fused, ring containing up to four hetero-atoms in each ring selected from oxygen, nitrogen and sulphur, and having from 4 to 7 ring atoms, which rings may be unsubstituted or substituted by up to three groups selected from amino, halogen, (C<sub>1-6</sub>)alkyl, (C<sub>1-6</sub>)alkoxy, halo(C<sub>1-6</sub>)alkyl, hydroxy, carboxy, carboxy salts, (C<sub>1-6</sub>)alkoxycarbonyl, (C<sub>1-6</sub>)alkoxycarbonyl(C<sub>1-6</sub>)alkyl, aryl, and oxo groups, and wherein any amino group forming part of a single or fused non-aromatic heterocyclic ring as defined above is optionally substituted by (C<sub>1-6</sub>)alkyl optionally substituted by hydroxy, (C<sub>1-6</sub>)alkoxy, thiol, (C<sub>1-6</sub>)alkylthio, halo or trifluoromethyl, acyl or (C<sub>1-6</sub>)alkylsulphonyl groups;

'aryl' is phenyl or naphthyl, optionally substituted with up to five groups selected from halogen, mercapto, (C<sub>1-6</sub>)alkyl, phenyl, (C<sub>1-6</sub>)alkoxy, hydroxy(C<sub>1-6</sub>)alkyl, mercapto (C<sub>1-6</sub>)alkyl, halo(C<sub>1-6</sub>)alkyl, hydroxy, amino, nitro, cyano, carboxy, (C<sub>1-6</sub>)alkylcarbonyloxy, (C<sub>1-6</sub>)alkoxycarbonyl, formyl and (C<sub>1-6</sub>)alkylcarbonyl groups;

'acyl' is (C<sub>1-6</sub>)alkoxycarbonyl, formyl or (C<sub>1-6</sub>) alkylcarbonyl.

**At page 4, lines 1-11:**

The invention also provides the use of a compound of formula (I) or a pharmaceutically acceptable **derivative salt and/or N-oxide** thereof in the manufacture of a medicament for use in the treatment of bacterial infections in mammals.

The invention also provides a pharmaceutical composition for use in the treatment of bacterial infections in mammals comprising a compound of formula (I), or a pharmaceutically acceptable **derivative salt and/or N-oxide** thereof, and a pharmaceutically acceptable carrier.

The invention further provides a method of treatment of bacterial infections in mammals, particularly in man, which method comprises the administration to a mammal in need of such treatment of an effective amount of a ~~a~~ compound of formula (I), or a pharmaceutically acceptable **derivative salt and/or N-oxide** thereof.

**At page 4, after line 14 and before lines 15-20:**

**Preferably one of Z<sup>1</sup>, Z<sup>2</sup>, Z<sup>3</sup>, Z<sup>4</sup> and Z<sup>5</sup> is N and one of Z<sup>3</sup> and Z<sup>5</sup> if not N is CR<sup>1a</sup> and the remainder are CH, or one of Z<sup>1</sup>, Z<sup>2</sup>, Z<sup>3</sup>, Z<sup>4</sup> and Z<sup>5</sup> is CR<sup>1a</sup> and the remainder are CH.**

**More** preferably Z<sup>5</sup> is CH or N, Z<sup>3</sup> is CH or CF and Z<sup>1</sup>, Z<sup>2</sup> and Z<sup>4</sup> are each CH, or Z<sup>1</sup> is N, Z<sup>3</sup> is CH or CF and Z<sup>2</sup>, Z<sup>4</sup> and Z<sup>5</sup> are each CH. Most preferably Z<sup>1</sup>-Z<sup>5</sup> are each CH.

**At page 4, lines 26-37:**

In one aspect, R<sup>3</sup> is preferably hydrogen, (C<sub>1-4</sub>) alkyl, ethenyl, **or 1-hydroxy-(C<sub>1-4</sub>) alkyl** optionally substituted **1-hydroxy-(C<sub>1-4</sub>) alkyl as defined in formula (I)**, more preferably hydroxymethyl, 1,2-dihydroxy(C<sub>2-4</sub>)alkyl wherein the 2-hydroxy group is optionally substituted **as defined in formula (I)**. Preferred examples of R<sup>3</sup> include hydroxymethyl, 1-hydroxyethyl or 1,2-dihydroxyethyl wherein the 2-hydroxy group is optionally substituted with alkylcarbonyl or aminocarbonyl where the amino group is optionally substituted **as defined in formula (I)**. Other suitable examples of R<sup>3</sup> include 2-hydroxyethyl, 2- or 3-hydroxypropyl, ethyl or ethenyl.

In another aspect R<sup>3</sup> preferably contains carboxy, **aminocarbonyl** optionally substituted **aminocarbonyl, as defined in formula (I)**, cyano or 2-oxo-oxazolidinyl optionally substituted by R<sup>10</sup>. Where R<sup>3</sup> is substituted alkyl is it preferably substituted methyl. Preferred examples of R<sup>3</sup> include CO<sub>2</sub>H, CH<sub>2</sub>CO<sub>2</sub>H,

(CH<sub>2</sub>)<sub>2</sub>CO<sub>2</sub>H, (CH<sub>2</sub>)<sub>2</sub>CN, CH(OH)CH<sub>2</sub>CN, CH(OH)CH<sub>2</sub>CO<sub>2</sub>H, CH=CHCO<sub>2</sub>H or 2-oxo-oxazolidinyl.

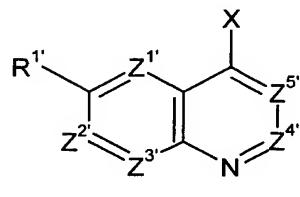
At page 6, lines 12-13:

The term 'acyl' includes (C<sub>2-6</sub>)alkoxycarbonyl, formyl or (C<sub>2-6</sub>)alkylcarbonyl group. Aryl are preferably substituted with up to three groups.

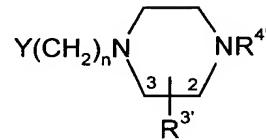
At page 7, lines 1-33 to page 8, lines 1-11:

In a further aspect of the invention there is provided a process for preparing compounds of formula (I), or a pharmaceutically acceptable derivative salt and/or N-oxide thereof, which process comprises:

(a) reacting a compound of formula (IV) with a compound of formula (V):



(IV)



(V)

wherein Z<sup>1</sup>, Z<sup>2</sup>, Z<sup>3</sup>, Z<sup>4</sup> and Z<sup>5</sup>, m, n, R<sup>1</sup>, R<sup>3</sup> and R<sup>4</sup> are as defined in formula (I), and X and Y may be the following combinations:

- (i) X is M and Y is CH<sub>2</sub>CO<sub>2</sub>R<sup>X</sup>, CH<sub>2</sub>CHO or CH<sub>2</sub>COW
- (ii) X is CO<sub>2</sub>RY and Y is CH<sub>2</sub>CO<sub>2</sub>R<sup>X</sup>
- (iii) one of X and Y is CH=SPh<sub>2</sub> and the other is CHO
- (iv) X is CH<sub>3</sub> and Y is CHO
- (v) X is CH<sub>3</sub> and Y is CO<sub>2</sub>R<sup>X</sup>
- (vi) X is CH<sub>2</sub>CO<sub>2</sub>RY and Y is CO<sub>2</sub>R<sup>X</sup>
- (vii) X is CH=PR<sup>Z</sup><sub>3</sub> and Y is CHO
- (viii) X is CHO and Y is CH=PR<sup>Z</sup><sub>3</sub>
- (ix) X is halogen and Y is CH=CH<sub>2</sub>
- (x) one of X and Y is COW and the other is NHR<sup>11'</sup> or NCO
- (xi) one of X and Y is (CH<sub>2</sub>)<sub>p</sub>-W and the other is (CH<sub>2</sub>)<sub>q</sub>NHR<sup>11'</sup> or (CH<sub>2</sub>)<sub>q</sub>OH
- (xii) one of X and Y is CHO and the other is NHR<sup>11'</sup>,

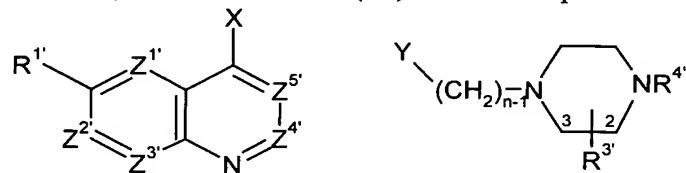
or where n=0

- (xiii) X is A-B-(CH<sub>2</sub>)<sub>n</sub>-W or A-B-(CH<sub>2</sub>)<sub>n-1</sub>-CHO and Y is H
- (xiv) X is NCO and Y is H
- (xv) X is CH<sub>3</sub> and Y is H
- (xvi) X is COCH<sub>2</sub>W and Y is H
- (xvii) X is CH=CH<sub>2</sub> and Y is H
- (xviii) X is oxirane and Y is H

in which W is a leaving group, R<sup>X</sup> and R<sup>Y</sup> are (C<sub>1-6</sub>)alkyl and R<sup>Z</sup> is aryl or (C<sub>1-6</sub>)alkyl;

or

(b) reacting a compound of formula (IV) with a compound of formula (Vb):



(IV)

(Vb)

wherein Z<sup>1</sup>, Z<sup>2</sup>, Z<sup>3</sup>, Z<sup>4</sup> and Z<sup>5</sup>, m, n, R<sup>1</sup>, R<sup>3</sup> and R<sup>4</sup> are as defined in formula (I), X is CH<sub>2</sub>NHR<sup>11</sup> and Y is CHO or COW;

in which Z<sup>1</sup>', Z<sup>2</sup>', Z<sup>3</sup>', Z<sup>4</sup>', Z<sup>5</sup>', R<sup>11</sup>', R<sup>1</sup>', R<sup>3</sup>' and R<sup>4</sup>' are Z<sup>1</sup>, Z<sup>2</sup>, Z<sup>3</sup>, Z<sup>4</sup>, Z<sup>5</sup>, R<sup>11</sup>, R<sup>1</sup>, R<sup>3</sup> and R<sup>4</sup> or groups convertible thereto, and thereafter optionally or as necessary converting Z<sup>1</sup>', Z<sup>2</sup>', Z<sup>3</sup>', Z<sup>4</sup>', Z<sup>5</sup>', R<sup>11</sup>', R<sup>1</sup>', R<sup>3</sup>' and R<sup>4</sup>' to Z<sup>1</sup>, Z<sup>2</sup>, Z<sup>3</sup>, Z<sup>4</sup>, Z<sup>5</sup>, R<sup>11</sup>, R<sup>1</sup>, R<sup>3</sup> and R<sup>4</sup>, converting A-B to other A-B, interconverting Z<sup>1</sup>, Z<sup>2</sup>, Z<sup>3</sup>, Z<sup>4</sup>, Z<sup>5</sup>, R<sup>11</sup>, R<sup>1</sup>, R<sup>3</sup> and/or R<sup>4</sup> and forming a pharmaceutically acceptable **derivative salt and/or N-oxide** thereof.

**At page 20, lines 31-33:**

No toxicological effects are indicated when a compound of formula (I) or a pharmaceutically acceptable salt **or in vivo hydrolysable and/or N-oxide** thereof is administered in the above-mentioned dosage range.